

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for isolating one or more T cells that cross-react with a self-antigen and a foreign antigen comprising:

- (a) incubating a sample comprising T cells with an antigen that comprises an epitope present in the self-antigen and the foreign antigen, and wherein said sample optionally comprises one or more autoantigens; and
- (b) isolating the one or more cross-reactive T cells by cloning or direct expansion,

~~wherein the self-antigen is myelin basic protein and wherein the foreign antigen is human herpesvirus-6 U24~~
wherein the self-antigen comprises a sequence of residues 96-102 of myelin basic protein or residues 93-105 of myelin basic protein, and wherein the foreign antigen comprises a sequence of residues 4-10 of human herpesvirus-6 U24 or residues 1-13 of human herpesvirus-6 U24.

2. (Canceled)

3. (Previously Presented) The method of claim 1, wherein the autoantigen is selected from the group consisting of myelin basic protein, proteolipid protein, myelin oligodendrocyte glycoprotein, collagen type II peptides, heat shock protein, MAGE, PSA, CA125, GAD protein, and tumor associated antigen.

4. (Previously Presented) The method of claim 1, wherein the autoantigen comprises an immunodominant epitope of a member selected from the group consisting of myelin basic protein, proteolipid protein, myelin oligodendrocyte glycoprotein, collagen type II peptides, heat shock protein, MAGE, PSA, CA125, GAD protein, and tumor associated antigen.

5. (Currently Amended) The method of claim 4, wherein said immunodominant epitope is selected from the group consisting of residues 83-99 of myelin basic protein and residues ~~451-470~~
151-170 of myelin basic protein.

6. (Currently Amended) The method of claim 1, further comprising selecting one or more T cells that express one or more first markers selected from the group consisting of CD69, CD4, CD25, CD36 and HLADR and one or more second markers selected from the group consisting of IL-2, IFN γ , TNF α , IL5, IL-10 and IL-13.[[.]]

7. (Canceled)

8. (Previously Presented) The method of claim 6, wherein the autoantigen is selected from the group consisting of myelin basic protein, proteolipid protein, myelin oligodendrocyte glycoprotein, collagen type II peptides, heat shock protein, MAGE, PSA, CA125, GAD protein, and tumor associated antigen.

9. (Canceled)

10. (Canceled)

11. (Currently Amended) The method of ~~claim 7~~claim 6, wherein the cells expressing said first and said second markers are selected using antibodies to said first and second markers respectively, or optionally a bi-specific antibody which binds both first and second markers in combination with an antibody which binds said second marker.

12. (Previously Presented) The method of claim 11, wherein one or more of said antibodies is fluorescently labeled and wherein said T cell is selected by fluorescent activated cell sorting.

13. (Canceled)

14. (Previously Presented) The method of claim 11, wherein said first antibody is conjugated to a magnetic microbead and wherein said T cell is selected by magnetic activated cell sorting.

15. (Canceled)

16. (Currently Amended) A composition comprising one or more T cells that cross-react with a self antigen and a foreign antigen,

~~wherein the self-antigen is myelin basic protein~~ comprises a sequence of residues 96-102 of myelin basic protein or residues 93-105 of myelin basic protein,

~~wherein the foreign antigen is human herpesvirus-6 U24~~ comprises a sequence of residues 4-10 of human herpesvirus-6 U24 or residues 1-13 of human herpesvirus-6 U24, and

wherein the cross-reacting T cells are enriched with respect to other T cells that react with the self-antigen.

17. (Currently Amended) The composition of claim 16, ~~wherein the self-antigen comprises a sequence of residues 96-102 of myelin basic protein or residues 93-105 of myelin basic protein;~~ and wherein the foreign antigen comprises a sequence of residues 4-10 of human herpesvirus-6 U24, ~~residues 1-13 of human herpesvirus-6 U24~~ T cells express one or more first markers selected from the group consisting of CD69, CD4, CD25, CD36 and HLADR, and one or more second markers selected from the group consisting of IL-2, IFN γ , TNF α , IL5, IL-10, and IL-13.

18. - 20 (Canceled)

21. (Previously Presented) A method for treating an autoimmune disease in a patient, comprising administering the composition of claim 16 to a patient in need thereof.

22. (Currently Amended) A method for producing the composition of claim 16, comprising:

- (a) incubating a sample derived from said patient comprising T cells with an antigen that comprises an epitope present in a self-antigen and a foreign antigen, wherein said sample optionally comprises, one or more autoantigens;
- (b) selecting one or more T cells that express one or more first markers selected from the group consisting of CD69, CD4, CD25, CD36 and HLADR and one or more second markers selected from the group consisting of IL-2, IFN γ , TNF α , IL5, IL-10 and IL-13; and
- (c) inactivating the T cells selected by step (b),

~~wherein the self-antigen is myelin basic protein and wherein the foreign antigen is human herpesvirus-6 U24 wherein the self-antigen comprises a sequence of residues 96-102 of myelin basic protein or residues 93-105 of myelin basic protein, and wherein the foreign antigen comprises a sequence of residues 4-10 of human herpesvirus-6 U24 or residues 1-13 of human herpesvirus-6 U24.~~

23. (Previously Presented) The method of claim 22 further comprising expanding the number of T cells selected in step (b).

24. - 27 (Canceled)

28. (New) The composition of claim 16, wherein the T cells are present at a concentration of 5×10^3 cells/mL to 1×10^9 cells/mL.

29. (New) The composition of claim 28, wherein the T cells are present at a concentration of 2×10^6 to 9×10^7 cells/mL.

30. (New) The method of claim 21, wherein the autoimmune disease is multiple sclerosis.

31. (New) The method of claim 21, wherein the autoimmune disease is rheumatoid arthritis.

32. (New) The method of claim 21, wherein the treatment represses the autoimmune disease.

33. (New) The method of claim 21, wherein the autoreactive T cells of the patient have undergone a clonal shift or epitope spreading.